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cc L. Braxton
ACT/015/025

United States Department of the Interior

OFFICE OF SURFACE MINING
RECLAMATION AND ENFORCEMENT
BROOKS TOWERS
1020 15TH STREET
DENVER, COLORADO 80202

TAKE PRIDE IN AMERICA

In Reply Refer To:

1713M

September 11, 1987

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UT--0053-01

Dr. Dianne Nielson, Director
Utah Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

SEP 16 1987

Dear Dr. Nielson:

The initial review comments of the Office of Surface Mining Reclamation and Enforcement on the Coop Mining Company Bear Canyon mine permit application package are enclosed.

If you have any questions about these comments, please contact Richard Holbrook at (303) 844-2451.

Sincerely,

Peter A. Rutledge, Chief
Division of Federal Programs

Enclosure

cc: R. Hagen, OSMRE-AFO (w/encl.)
B. Boley, USFS, Manti-LaSal National Forest (w/encl.)
G. Nodine, BLM, Moab District Office (w/encl.)

1713M

SEP 16 1987

Bear Canyon Mine Permit Application Package
Initial Review Comments
September 11, 1987

1. The undated "cover letter" identifies the permit application package (PAP) as "Draft Technical Analysis Response Deficiencies". The letter is followed by 11 pages of what appear to be responses to stipulations in a draft technical analysis prepared by the Utah Division of Oil, Gas and Mining (DOGM). The relationship of this material to the PAP must be identified.

2. The PAP is poorly organized, inconsistent, contradictory, inaccurate and difficult to use. Inconsistencies are too numerous to list in detail. Examples are cited below.

The first sentence on page 1-3 identifies acreages controlled by Co-op Mining Company (Co-op). The figures do not compute. In that same paragraph, it states that production will increase to 400,000 tons per year in the fourth year. On page 1-6 it states that production was to reach 400,000 tons per year in 1986. The second paragraph on page 1-3 states there are 3 portals but only discusses two portals. The PAP also uses different names for what appear to be the same coal seams.

It appears that this PAP is a partially "updated" document. On page 3-20, the first paragraph discusses mining in the Hiawatha seam at a later date and that plans will be submitted to Utah DOGM for approval prior to entering the seam. It is our understanding that those plans have been submitted and approved by Utah DOGM.

Table 2-1 on page 2-2 identifies parcels by property owner. Plate 2-1 does not show the parcels. The easterly boundary of Federal lease U-024316 is incorrectly shown on Plates 2-1, 3-4, and 3-4a; the lease area in section 13 is the W1/2W1/2, not all lands west of Bear Canyon Fault as shown on the Plates.

On page 3-34, it states the permit area contains approximately 1700 acres. Plate 2-1 shows approximately 1550 acres in the permit area.

The permit area shown on Plate 2-1 does not coincide with the permit area shown on Figure 3-4 (page 3-34A).

The PAP must be corrected and updated to provide complete and accurate data and information in the mining and reclamation plan that reflects the status of current operations and the plans for future operations. The PAP is presently too inaccurate, inconsistent, and confusing to provide complete, meaningful, and concise review comments on the mining plan.

3. The supplemental information required under 30 CFR 740.13(b)(3)(iii) appears not to be present. The applicant must identify the specific location of that information in the PAP. An adequacy review of that information will be made when the information is provided or located. In addition, the applicant must provide designs and drawings, with

dimensions, of all powerlines to show that the powerlines are designed to protect against electrocution of raptors, and the applicant must provide an estimate of the average annual depletion of surface water resulting from the mining and reclamation operations to satisfy the requirements of the Windy Gap process. A discussion paper on the Windy Gap process is attached.

4. Because the Federal leases were issued before July 19, 1979, a Federal lands review must be conducted before action is completed on the permit application. To assist OSMRE in ensuring completion of the Federal lands review, the technical analysis or supplemental report in the draft decision package should contain the information discussed in the attached guidelines.

5. The PAP should clearly show the existing approved permit area and the area to be added to the existing permit area.

Attachments

Discussion Paper, Windy Gap Process
Federal Lands Review Assistance Guidelines

Discussion Paper

U. S. Fish and Wildlife Service Windy Gap Process as it Applies to Existing Coal Mines in the Upper Colorado River Basin

The Fish and Wildlife Service (FWS) Windy Gap Process is a procedure whereby projects within the Upper Colorado River Basin are assessed, on a one-time basis, $15.00 per acre-foot of identified streamflow depletion resulting from their operations. Assessments accrue to a $25 million conservation fund to study and protect endangered fish species. The means of identifying streamflow depletions at existing underground and surface mines is the subject of this paper.

Coal mining or coal-processing operations which may affect streamflow, either directly or indirectly, are first identified. Next, the potential for an identified operation or process to deplete or, in some cases, to augment streamflow is considered. The facility with which streamflow effects resulting from the individual operation or process may be quantified is then addressed. Finally, based on the assessments of individual operations or processes, a recommendation is made to: 1) generally include the operation or process in individual mine streamflow depletion assessments, 2) eliminate the operation or process from further consideration, or 3) evaluate the depletion on a case-by-case basis using the recommended criteria.

UNDERGROUND MINING

Mining Consumption

This includes water consumption by mining equipment and machinery, primarily for dust control. In Utah, estimates of this type of operational consumption for mines in the Mud Creek Basin CHIA area (OSM, 1984) have been made, based on a figure of 3.2 gallons per ton of coal mined. Annual consumption for the five CHIA area mines ranges from 1 to 53 acre-feet. The CHIA documentation cautions, however, that the estimates are worst-case assumptions based on maximum production capacity rather than actual production. The CHIA adds that the water consumed is derived from ground-water storage and will ultimately result in reduced surface-water discharge in the basin.

The 3.2 gallons/ton figure is an easily-applied number. However, because the annual consumption estimate will vary widely for individual mines and because the effect on streamflow is indirect and possibly very long term, it is recommended that depletions from this effect be estimated only for mines with an annual production in excess of 100,000 tons and only where the source of water is from surface diversions or is clearly derived from alluvial aquifers either by means of alluvial wells or mine inflows via subcropping of affected aquifers beneath alluvial aquifers. If the applicant has estimated operational consumption, this figure should be used in lieu of the 3.2 gallons-per-ton figure.

Ventilation Consumption

This includes evaporation from the coal seam induced by low-humidity incoming air which becomes nearly saturated before it exits the mine. This loss is directly proportional to the areal extent of the underground workings. Estimates of ventilation loss for the Mud Creek Basin CHIA area are based on an estimate derived at Valley Camp of Utah, Inc. Belina mines. The Belina mines evaporation loss estimate is 26 acre-feet of water per year for 1935 acres of underground workings, or 8.6 acre-feet/year/square mile. This figure, when applied to the other CHIA area mines, gives ventilation loss estimates ranging from 4 to 65 acre-feet/year for the five mines. The CHIA document indicates that this loss is derived from ground-water storage and will ultimately result in reduced surface-water discharge in the basin.

Although the 8.6 acre-feet/year/square mile figure is easily applied, widely divergent mine areas and probable significant attenuation of the indirect, long-term effects on streamflow argue against generally estimating such losses for all mines. It is recommended that consumption from this effect be estimated only for mines with more than 0.1 square mile of underground workings--and only where mine inflows are clearly derived from subcroppings of affected aquifers beneath channel alluvium. If the applicant has estimated ventilation loss, this figure should be used in lieu of the 8.6 acre-feet/year/square mile figure.

Coal producing consumption

This includes coal-preparation plant use for coal washing, processing, etc. Price River Coal Company, Utah, for example, estimates maximum annual consumption to be 398 acre-feet for its preparation plant facility. Because the source of this water is a direct diversion from the Price River, the consumption is a direct depletion from streamflow. However, actual coal production at the mine averages about 25 percent of capacity per year, reducing actual consumption accordingly.

Because coal preparation plants require reliable water supplies, the source of such supplies will probably be streamflow diversions or high-yield alluvial wells--both of which can generally be considered direct depletions from streamflow. Because of the nature of the supply and the relatively large quantities of water needed, it is recommended that this source of consumption be estimated for all such coal-processing facilities. However, because consumption for such uses can be closely estimated, actual rather than maximum potential use should be the basis for the streamflow depletion estimate.

Sediment pond evaporation

This is a loss from stored water generally derived from interception of surface runoff. Most such storage represents only a temporary detention due to the regulatory dewatering requirement. The temporary nature of sediment pond storage is recognized, for instance, by the State of Wyoming, which issues permits in such cases only for sedimentation-control purposes. These permits require that the ponds be evacuated when discharge standards are met. In instances where sediment pond water is consumptively used, such as for dust control, irrigation, etc., such use is specifically authorized in the permits.

For underground mines, the area of surface disturbance is generally small, requiring only minimal pond capacities. For instance, the total surface ara of all Prive River Coal Company sediment ponds at maximum capacity is about 2.0 acres. A maximum possible annual evaporation from these ponds is less than 7.0 acre-feet, based on 40 inches annual evaporation. Where significant mine pumpage is retained in ponds, then the evaporation estimate should consider average pond surface areas resulting from such sustained inflows if the source of mine water is an abstraction from alluvial aquifers.

Subsidence effects on springs and seeps

The principal effect of subsidence is disruption of bedrock aquifers which supply springs and seep flows. The effects of subsidence may be to either diminish or, in some instances, to augment flow. Interrupted or diminished flow may result from alteration of discharge points or yields with changes in potentiometric gradients and heads or short-circuiting of ground-water flow paths from aquifer to aquifer with changes in fault trace transmissivities, for example. Augmented flow could be induced by increased rates of infiltration as a result of surface fracturing and depression interception of surface flows.

The effects of subsidence on spring and seep flows are almost impossible to predict. Two recent Utah CHIA reports (Cottonwood Creek Basin and Mud Creek Basin) provide qualitative discussions which identify potentially affected spring and seep flows. However, quantifying such effects depends on ongoing monitoring as mining progresses. In the absence of data to the contrary, it is recommended that subsidence effects on spring and seep flows be analyzed using a worse case scenario.

Alluvial well pumpage

Alluvial wells may supply water to both surface facilities and underground operations--or to coal processing plants. In most instances, pumpage from such wells can be considered as depletions from streamflow. Two conditions may exist within valley-fill, alluvial aquifers: Alluvial ground water may either discharge to, and augment, streamflow; or streamflow may infiltrate to, and augment, alluvial ground water. However, in both instances, alluvial well pumpage can be considered as streamflow depletion. In the first instance, pumpage intercepts water that would otherwise eventually augment streamflow. In the second instance, pumpage induces an equivalent abstractionf from streamflow as a result of increased gradients, and hence flow rates, away from the stream channel.

Except in the unlikely instance that alluvial wells are hydraulically isolated from stream channels, it is recommended that alluvial well pumpage be considered as a depletion from streamflow.

Alluvial aquifer abstractions into mines

Such abstractions usually occur where mine-affected aquifers subcrop beneath valley-fill alluvial aquifers. Ground-water movement between the bedrock and alluvial aquifers may be in either direction, and mining may still affect streamflow either by inducing a reversal of water table gradients that normally are away from mining or interception of ground water that would eventually be tributary to streamflow.

Quantifying streamflow depletions from such effects is not nearly so straightforward as for alluvial well pumpage, as discussed above. Effects on streamflow are indirect, may be short term or long term or both, and are difficult to define because of the multiple aquifers affected. Defining an effect on streamflow is further complicated by considering that such mine-induced inflows will normally be pumped out of the mine and returned, after treatment, to surface flows. Mine discharges returned to surface flows are essentially immediate inflows, whereas induced abstractions from streamflow via aquifer depletions may be very long term.

An example of such induced alluvial aquifer inflow is provided by the Eagle No. 9 mine in Colorado. Estimated alluvial aquifer inflow via bedrock subcrops is 35 gallons per minute. However, this inflow, together with deep aquifer inflow, is pumped out of the mine and returned to surface flows after retention in a pond. Mining has been underway for a sufficient period of time that inflow has stabilized at the 35 gallons-per-minute rate.

Because the situation at each mine will be unique to that mine, posible streamflow depletion from induced alluvial aquifer inflows will have to be estimated on a case-by-case basis. However, it is suggested that, in most instances, any such inflows will probably be recycled to surface flows. It is recommended, therefore, consumptive use of such inflows and evaporation from ponds prior to return to surface flow be considered as streamflow depletions.

Deep aquifer pumpage

For consideration of streamflow effects, deep aquifers are those that are hydraulically isolated from surficial aquifers, at least insofar as relatively short-term effects are concerned, and whose recharge areas are relatively remote from the mine. Because inflows from such aquifers are isolated from mine-area surface flows, any such inflows that are not consumptively used and that are pumped out of the mine and into stream channels can be considered augmentations to streamflow. Such streamflow augmentations are failry common for underground mines. Estimates for the Eagle No. 9 mine (Colorado) indicate streamflow augmentation of about 1,550 acre-feet/year for 20 years of mining activity. The Cottonwood Creek Basin (Utah) CHIA report estimates streamflow augmentation of about 2,900 acre-feet/year during mining.

It is recommended that any such augmentations to streamflow derived from deep aquifer mine inflows be factored into the equation when overall mining effects on annual surface flows are estimated.

Postmining inflow to workings

This is inflow to mine workings following shutdown of mining. Depending on whether inflows are induced from surficial aquifers or are from deep aquifers, a depletion from streamflow may occur following mining. Estimates for the Eagle No. 9 mine are for inflows of 56 acre-feet/year for 3 years, derived from the alluvial aquifer. The Cottonwood Creek CHIA report estimates an almost identical 55 acre-feet/year depletion from streamflow but is unclear as to the duration of the depletion.

Considering that pumped mine outflows originating from deep aquifers and postmining inflows derived from alluvial aquifers do not occur concurrently, it may be difficult to include these items in a single equation for estimating net streamflow depletion or augmentation at least insofar as the effects on endangered fish species are concerned.

Coal moisture loss

This is loss of water adhering to coal as it is brought to the surface. An estimate of such losses at the Eagle No. 9 mine is 0.5 acre feet/year. Considering that this represents the loss for a production of 1.5 million tons/year, it is recommended that such effects, being generally insignificant, be eliminated from consideration as streamflow depletions.

Direct diversions

For purposes of the Windy Gap Process, no differentiation should be made between consumptive use occurring under a historic appropriation and that occurring under a new appropriation (post Windy Gap Policy). Water diverted under a new appropriation would cobstitute a new depletion from streamflow, as would water diverted under a purchased, existing right. In the first instance, the applicant for the new diversion must demonstrate that water is available and that the new diversion will not harm senior rights. In practice, new water rights generally do not provide reliable water supplies. In the second instance, the applicant must demonstrate that purchase and transfer to the mine of an exiwting water right will not damage intervening and downstream senior rights. In addition, the transferred right is generally limited to historical use.

It is recommended. therefore, that all diversions resulting from purchase and transfer of exiwting water rights, as well as actual diversions under new appropriations be considered as streamflow depletions under the Windy Gap Process. The initial Federal decision on a particular operation will consider any depletion (historic or new) as a new streamflow depletopn and, therefore, subject. to a Windy Gap Assessment. Subsequent decisions on the same operation will compare depletion levels against the initial depletion level to determine if an additional assessment should be made.

Sediment pond interception and evaporation

These are losses from streamflow due to runoff impoundment and resultant evaporation. The number of sediment ponds used in surface mining operations is generally much larger than for underground operations. Accordingly, the potential for evaporation loss is much greater for surface mines than for underground mines. The mode of operation of sediment ponds results in minimum water surface areas for evaporation. Regardless of storage permit requirements, however, most mining operations will evacuate ponds under regulatory dewatering requirements, thus minimizing evaporation surfaces. Operations like that at Black Mesa/Kayenta mine, Arizona, however, design their ponds as zero discharge facilities wth no provision for downstream dewatering and generally with substantial excess capacity, thereby ensuring the retention of most storm runoff. Combining these considerations with the large number of ponds (over 140) and an average annual evaporation of over 50 inches per year will result in a substantial annual evaporation loss at the mine. USGS Professional Paper 272-D, "Evaporation from the 17 Western States," by Meyers, 1962, gives average annual lake evaporation which ranges from about 2.0 feet for eastern North Dakota to over 6.0 feet for southern Texas.

An alternate worse-case approach to sediment-pond losses is to assume that all intercepted runoff from pond drainage basis is lost from streamflow. Such estimates are based on average annual unit runoff for the mine area and ignore dewatering outflows. The advantage of this procedure is that estimates of average annual unit runoff are available (Busby, 1966) which can be combined with known pond basin areas to arrive at a streamflow depletion estimate. The direct evaporation estimate depends on an estimate of total pond water surface area, which may be difficult to achieve.

It is recommended that runoff intercepted by sedimentation ponds be considered a depletion from streamflow; but, because of the uncertainty in estimating average pond surface evaporation areas, this depletion should be determined on the basis of unit runoff interception. However, the total pond basin area used for this estimate should be the average, rather than the maximum for the proposed mining sequence.

Closed basins

Closed basins are generally created from final cuts which are incorporated into postmining topography for stock watering and wildlife enhancement. This type of impoundment, unlike sediment ponds, is the only impoundment resulting from mining which will permanently deplete streamflow; and it is, therefore, recommended that all intercepted runoff within the closed basin be considered streamflow depletion. Estimates of streamflow depletion resulting from closed basins may be made using either procedure discussed above for sediment

ponds. However, because regulations dictate that such permanent impoundments maximize water retention for postmining uses, the unit runoff approach, which assumes that the entire basin area is noncontributing, may be more appropriate in most cases.

It should be remembered that closed basins created during mining should be balanced against existing noncontributing areas when estimating resulting streamflow depletion. For example, historically glaciated areas of many North Dakota mines are internally drained; while 85 percent f the permit area of the East Gillette mine in wyoming is comprised of closed basins resulting from historic coal burns. Also to be cosidered are existing stock ponds and internally draining, previously mined areas that will be reclaimed to discharging areas by current operations.

Increased infiltration

This is an abstraction from runoff above premining conditions resulting from the regulatory requirements to reestablish infiltration rates. Because compliance with this requirement must be demonstrated, there should be estimates available comparing]remining and postmining infiotration rates. Although differences in infiltration may be slight, decreased runoff from the entire reclamation surface could constitute a definable abstraction from streamflow, assuming higher postmining infiltration. It is recommended that premining and postmining infiltration rates be compared and, if significantly different, that runoff effects be estimated possibly on the basis of the resulting change in annual unit runoff for the mine area.

Aquifer interruption

This is disruption of aquifers that are tributary to surface flows and, as such, eliminates from consideration deep aquifers that are hydraulically isolated from surface flows. Disru]tion of alluvial aquifers which are not AVF's and, hence, do not have to be restored constitutes the most direct effect on streamflow. However, disruption of aquifers which subcrop beneath alluvial aquifers, as discussed for underground mines, may also affect streamflow. Because downstream flows may be affected, in most cases estimates of changes in alluvial underflow resulting from mining should be available for estimating streamflow depletions.

It is recommended that depletions from streamflow resulting from disruptions of mine-area alluvial aquifers be estimated in most cases. However, because streamflow effects resulting from disruption to aquifers subcropping beneath alluvial aquifers are indirect and difficult to estimate, in such cases it is recommended that only clearly-demonstrated and quantifiable effects be considered in estimating streamflow depletion.

Well pumpage

Well pumpage at mining operations usually represents potable water supplies from good quality, deep aquifers which are hydraulically isolated from surface flows. Therefore, it is recommended that only well pumpage from alluvial wells for uses such as dust control or coal processing, and only in quantities above 1.0 acre-feet per year, be considered as streamflow depletions.

Direct diversions and Coal-processing consumption

See discussions under Underground Mining.

REFERENCES

Busby, M.W., 1966, Annual runoff in the conterminous United States: U.S. Geological Survey Hydrologic Investigations Atlas HA-212, Washington, D.C.

Meyers, 1962, Evaporation from the 17 western states: U.S. Geological Survey Professional Paper 272-D, Washington, D.C.

OSM, 1984, Issue paper on FWS Windy Gap Process, Jan. 15, 1984, Denver, Colorado.

OSM, 1984, Cumulative hydrologic impact assessment in the Mud Creek Drainage Basin with respect to Valley Camp of Utah's Belina mines, Denver, Colorado.

OSM, 1984, Cumulative hydrologic impact assessment, Cottonwood Creek Basin, Emery County, Utah, Denver, Colorado.

OSM, 1984, Biological assessment for the Eagle No. 9 mine, May 10, 1969, Denver, Colorado.

Peabody Coal Company, Arizona Division, 1982, Black Mesa/Kayenta mine permit application package, Flagstaff, Arizona.

Price River Coal Company, 1982, permit application package, chapter 3, Price, Utah.

Wyoming State Engineer's Office, 1984, letter to Black Butte Coal Company, March 9, 1984, Cheyenne, Wyoming.

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Guidelines for Federal Lands Review Assistance by State Regulatory Authorities

Under section 522(b) of the Surface Coal Mining Control and Reclamation Act (SMCRA), the Secretary of the Interior must conduct a review of Federal lands to determine, pursuant to the standards set forth in sections 522(a)(2) and 522(a)(3) of SMCRA, whether there are areas on Federal lands that are unsuitable for all or certain types of surface coal mining operations. The Office of Surface Mining Reclamation and Enforcement (OSMRE) is responsible for ensuring that Federal lands within the permit area are reviewed prior to permit application approval pursuant to section 522(b) of SMCRA.

For Federal coal leases issued after July 19, 1979, BLM will have conducted the Federal lands review during the leasing process. However, for Federal coal leases issued on or before July 19, 1979, BLM will not have conducted the Federal lands review during the leasing process, and the review must be conducted during the permitting process. In addition, other Federal lands in the permit area that are outside Federal lease areas must also be reviewed during the permitting process.

Section 522(a)(2)

Section 522(a)(2) of SMCRA requires that reclamation must be technologically and economically feasible. OSMRE reviews the operation and reclamation plan portion of the permit application package (PAP) and reviews the finding and supporting documentation of the State regulatory authority (RA) that reclamation, as required by the State program approved pursuant to SMCRA, can be accomplished under the reclamation plan contained in the PAP. This review, assuming OSMRE's acceptance of the State RA's analysis, is sufficient to determine that reclamation is technologically feasible.

OSMRE also reviews the State RA's analysis of reclamation costs determined for the bonding requirement. As a result of this review, again assuming OSMRE's acceptance of the State RA's analysis, OSMRE can determine that the reclamation as proposed in the PAP is economically feasible. Thus, the decision package prepared by the State RA for OSMRE should include the State RA's analysis of reclamation costs determined for the bonding requirement.

Section 522(a)(3)

Section 522(a)(3) of SMCRA states that "...a surface area may be designated unsuitable for certain types of surface coal mining operations if such operations will:

(A) be incompatible with existing State or local land use plans or programs; or

(B) affect fragile or historic lands in which such operations could result in significant damage to important historic, cultural, scientific, and esthetic values and natural systems; or

(C) affect renewable resource lands in which such operations could result in a substantial loss or reduction of long-range productivity of water supply or of food or fiber products, and such lands to include aquifers and aquifer recharge areas; or

(D) affect natural hazard lands in which such operations could substantially endanger life and property, such lands to include areas subject to frequent flooding and areas of unstable geology."

To assist OSMRE in making the determinations pursuant to section 522(a)(3) of SMCRA, State RA's should include the information discussed below in the draft decision package that is provided to OSMRE.

(A) Land use

Identify the State and local land use plans (e.g., county zoning) and programs (e.g., county special use permits) for the permit area and state how the proposed operations including postmining land use(s) are not incompatible with those plans and programs. (Note: If a permit or zoning approval is required and the company has not obtained it, a special condition may be needed in the State permit requiring such approval.)

(OR)

State "There are no State or local land use plans or programs for the permit area."

(B) Fragile and historic lands

State "The proposed mining and reclamation operations will not result in significant damage to important historic, cultural or scientific resources in the permit area based on the surveys and information contained in the permit application package, and information provided by the State Historic Preservation Officer." (Note: To obtain a permit for mining operations on Federal lands, the applicant must comply with the National Historic Preservation Act; therefore, no significant damage can occur if a permit is to be issued.)

AND

Identify areas of important fragile lands as defined at 30 CFR 762.5; state "the mining and reclamation operations will not significantly damage the important fragile lands," and state why.

(OR)

State "There are no important fragile lands as defined in 30 CFR 762.5 containing natural, ecologic, scientific esthetic resources, or natural systems in the permit and adjacent areas."

(C) Renewable resource lands

State "Based on the assessment of cumulative hydrologic impacts and probable hydrologic consequences of the proposed operations, the mining and reclamation operations will not result in a substantial loss or reduction of long-range

productivity of the water supply in the area including aquifers and aquifer recharge areas." (Note: The State RA must find that the operations are designed to prevent material damage to the hydrologic balance outside the permit area; therefore, the statement is appropriate in all cases when a permit is to be issued.

AND

Identify food production (e.g., crops, cattle) fiber production (e.g., timber, cotton) and state "The mining and reclamation operations will not result in a substantial loss or reduction of long-range productivity of the lands producing the food and fiber products because the lands will be reclaimed to the level of productivity that they were capable of supporting before mining." (Note: If there is a change in postmining land use, additional explanation may be needed.)

(OR)

State "There are no food or fiber products being produced in the permit area."

(D) Natural hazard lands

Identify areas of unstable geology; state "The mining and reclamation operations will not substantially endanger life and property because of the effects of mining and reclamation operations on the areas of unstable geology"; and state why.

(OR)

State "There are no areas of unstable geology in the permit and adjacent areas."

AND

Identify areas subject to frequent flooding; state "The mining and reclamation operations will not substantially endanger life and property because of the effects of mining and reclamation operations on the areas subject to frequent flooding"; and state why.

(OR)

State "There are no areas subject to frequent flooding in the permit and adjacent areas."

OSMRE will review the PAP and will review the State RA's analysis of unsuitability pursuant to section 522(a)(3) of SMCRA. As a result of this review, and again assuming OSMRE's acceptance of the State RA's analysis, OSMRE can make the finding that the Federal lands within the permit area are not unsuitable for mining under the criteria in section 522(a)(3) of SMCRA pursuant to section 522(b) of SMCRA.